

(No Model.)

J. D. WILSON.  
VEHICLE AXLE.

No. 492,651.

Patented Feb. 28, 1893.

Fig 1

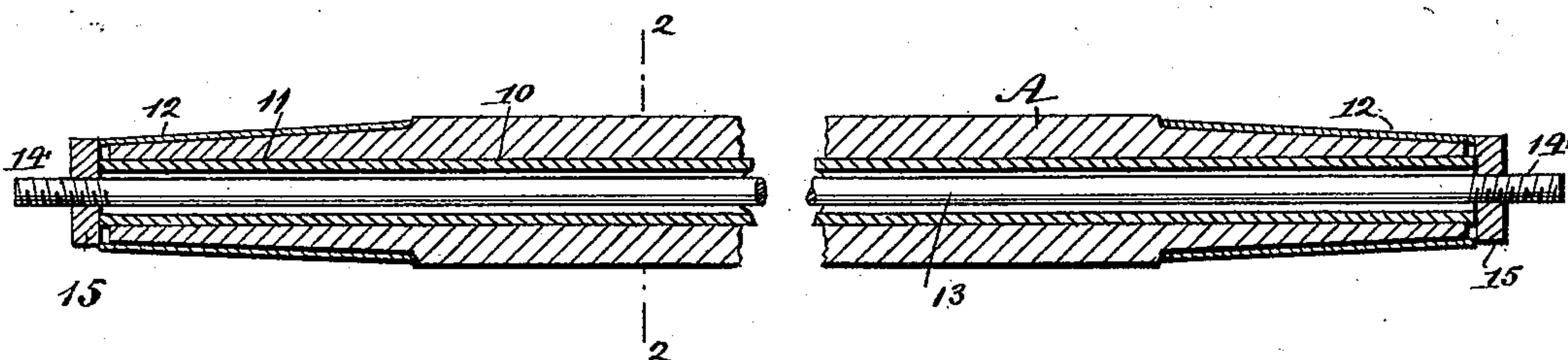
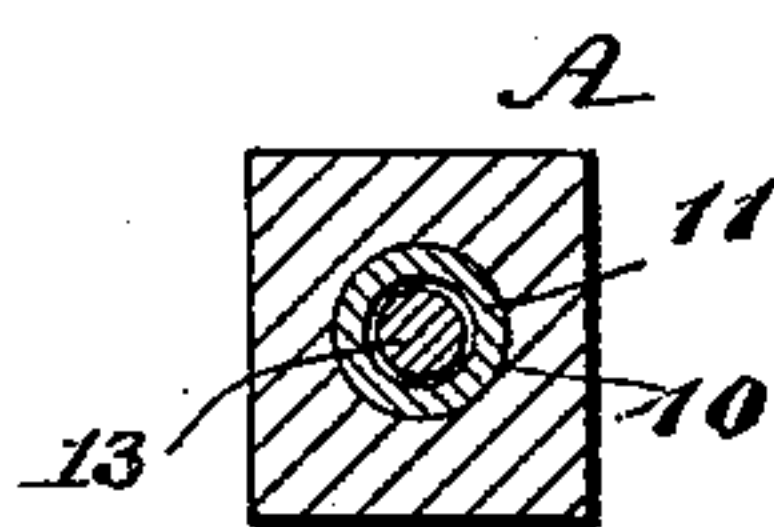


Fig 2



WITNESSES:

H. Walker  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

JOHN D. WILSON, OF BELLE PLAINE, IOWA.

## VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 492,651, dated February 28, 1893.

Application filed July 19, 1892. Serial No. 440,506. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN D. WILSON, of Belle Plaine, in the county of Benton and State of Iowa, have invented a new and useful Improvement in Vehicle-Axles, of which the following is a full, clear, and exact description.

My invention relates to an improvement in vehicle axles, especially hay rake axles and the axles of horse power sweeps, and has for its object to provide an axle mainly constructed of wood or a like material, and to strengthen said axle without adding materially to its weight, and further to provide a means whereby the axle skein will be held firmly in place.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in both the views.

Figure 1 is a longitudinal vertical section through an axle embodying my improvements; and Fig. 2 is a vertical section taken practically on the line 2—2 of Fig. 1.

The body A of the axle is constructed of wood, and it is provided with a longitudinal bore 10, which extends from end to end and is practically located in the center of the axle proper. In this bore a tube 11, is introduced, and when the axle is subjected to the action of the weather the body of it will so shrink upon the tube as to render the two parts virtually integral. At the spindle portion of the axle the usual skein 12, is located, and through the tube contained in the axle a rod 13, is passed, which rod at its outer extremities is provided with a thread, as shown at 14 in the drawings. The threaded portion of the rod may be of any desired length, and said ex-

tremities carry nuts 15 which when screwed thereon have bearings against the skeins and effectually hold the latter in position. The rod 13, may be of any desired size. In the drawings it is shown as much smaller in diameter than the diameter of the tube, but if in practice it is found desirable the rod may be practically of the same diameter as the inside of the tube.

When an axle is constructed as above set forth it is not only durable and simple but it is exceedingly economic, and it possesses much more strength than an axle constructed entirely of wood and much more strength and lightness than a metal axle; furthermore this axle is a decided improvement over axles having wooden bodies wherein metal longitudinal braces or supports are employed, the latter being located beneath the body.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In an axle, the combination, with a wooden body having its ends shaped for entrance into the hub of a wheel and provided with skeins, said wooden body being provided with a longitudinal bore extending centrally through it from end to end, of a metal tube immovably held in the bore of the body of the axle, a rod extending through the tube and beyond the ends thereof, the extremities of the said rod being threaded, and nuts located upon the threaded portions of the rod, having bearing against the outer extremities of the skeins, substantially as shown and described, whereby the wooden axle is strengthened against strain brought upon it in any direction.

JOHN D. WILSON.

Witnesses:

J. B. COX,  
S. WERTHEIM,  
J. J. MOSNAT.